

storage element including a plurality of storage spaces for said components;

said at least one gripper having a holding end capable of picking up said components at feed devices and transporting and placing said components to fitting locations on said substrate; and

said at least one storage element being separate from said at least one gripper and movable relative thereto along with said plurality of storage spaces, (whereby components picked up by said at least one gripper) can be deposited at said plurality of storage spaces of said at least one storage element such that the deposited components can be removed from said plurality of storage spaces via said at least one gripper and placed onto said substrate.

20. (New) An apparatus according to claim 19, wherein said components are fixed at said holding end of said at least one gripper, said holding end being movable transversely with respect to a placement direction of said components into a transfer position assigned to said transfer station on said fitting head, and said plurality of storage spaces in said fitting head being successively displaced to said transfer station.

21. (New) An apparatus according to claim 20, wherein said at least one gripper is mounted on said pivoting element of said fitting head, and said holding end is pivotable transversely, with respect to the placement direction, between a placement station and said transfer station via the pivoting element.

22. (New) An apparatus according to claim 21, wherein said at least one gripper is mounted in a guide in said pivoting element, such that said at least one

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gripper is displaceable longitudinally in the placement direction.

23. (New) An apparatus according to claim 22, wherein said holding end in said transfer station is displaceable longitudinally in a direction relative to one of said plurality of storage spaces.

24. (New) An apparatus according to claim 20, wherein said at least one gripper is a suction device, and a pressure condition in said suction device in the transfer position is controlled such that a holding force is greater than or less than a holding force exerted by one of said plurality of storage spaces.

25. (New) An apparatus according to claim 20, wherein said plurality of storage spaces are distributed in a grid-like fashion on a sliding part mounted on said fitting head, said sliding part being displaceable in a step-by-step fashion, such that when said sliding part is displaced, said plurality of storage spaces are displaced successively relative to said transfer station.

26. (New) An apparatus according to claim 25, wherein said sliding part is provided with suction openings for said components.

27. (New) An apparatus according to claim 26, wherein said suction openings are permanently connected to a common suction line.

28. (New) An apparatus according to claim 27, wherein said at least one storage element is provided with means for changing the pressure condition in said

suction devices.

* 29. (New) An apparatus according to claim 10, wherein said sliding part is of annular design and rotatably mounted.

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* 30. (New) An apparatus according to claim 29, wherein the axis of rotation of said sliding part is congruent with the longitudinal axis of said at least one gripper located in the placement position, and said plurality of storage spaces have supporting surfaces extending perpendicularly to the longitudinal axis of said at least one gripper.

* 31. (New) An apparatus according to claim 30, wherein said pivoting element is provided with a plurality of guides for cooperation with said at least one gripper, and said plurality of guides can be pivoted successively into the transfer position.

* 32. (New) An apparatus according to claim 31, wherein said pivoting element comprises, two holders, each having longitudinal axes forming a V shape with respect to each other in a pivoting plane, such that said holders are alternatively pivotable into the placement position in which a respective one of said holders is in the transfer position.

* 33. (New) An apparatus according to claim 31, wherein said pivoting element is constructed as a turret-like rotor having a multiplicity of circularly arranged

grabbers, and in that the rotor can be driven and indexed in accordance with the angular pitch of said grabbers.

A1 ~~X~~ 34. (New) An apparatus according to claim 33, wherein a plurality of working stations are provided along a circulation path of said grabbers and said stator of said fitting head, and at least one of said working stations forms said transfer station of said fitting head.

~~X~~ 35. (New) An apparatus according to claim 34, wherein, in the direction of rotation of said rotor, between said transfer station and said placement station, a sensing station is disposed for determining the position of said components and a rotation station for said components.

~~X~~ 36. (New) An apparatus according to claim 35, wherein said fitting head has one storage element, assigned to a transfer station. - -

IN THE ABSTRACT

Cancel the Abstract as filed, and insert therefore on a separate page, the following Abstract of the Disclosure:

- - ABSTRACT OF THE DISCLOSURE

A2 An apparatus for placing electrical components upon a substrate. The apparatus is provided with a fitting head and at least one gripper, and the fitting head has a storage element which can be successively filled with the electrical components. The fitting head first moves over the substrate, then the gripper successively removes components from the storage element and places them onto the substrate in a proper